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BACK BAY: CONDITION OF THE HOUSING STOCK

Housing Age and Condition - Census Data

For purposes of comparison, the census data on housing unit conditions has some utility; the intrinsic value of the data however is to be questioned. A more reliable and definitive description of residential building condition is presented later, based on the local B.R.A. survey of building conditions throughout the city.

According to the 1960 Census data, residential units in Back Bay are generally in slightly better condition than is the average for housing units throughout the city. Approximately one of six units within the area is considered not in sound condition. This compares favorably to slightly over one out of five for the entire city. The bulk of unsound units in Back Bay are considered only deteriorated. The 15% of all units so classified is slightly below the city norm. Only 1% are adjudged as dilapidated, a percentage but one-fourth the city-wide figure.

This high quality of residential units attests to both the original construction standards and the present economic vitality of most of the area. Almost no new residential construction occurred in Back Bay between 1940 and 1960. According to Census data, 99.5% of the present units are in structures built before 1940, and as is well-known most of the area was developed during the 19th century.

Condition of Residential Structures - B.R.A. Survey

On the basis of the recent survey of condition of structures conducted by the B.R.A., the quality of housing in the Back Bay is markedly superior to the city in general. Only 14% of residential

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structures need extensive minor repairs, and but 1% require major repairs.

For the 4 major survey areas within Back Bay the expected relationship between income level and housing condition is evident. The highest income area bordering the Charles River has but 5% of residential structures in need of extensive minor repairs and none requiring major repairs. The other high income area bordering the north side of Boylston Street has but a slightly higher percentage of substandard units. The low income neighborhood between Massachusetts Avenue and the Prudential Center site contains 46% substandard units, though for the preponderance of such units major repairs are not required.

BACK BAY GNRP R-47

CONDITION OF STRUCTURES: All and Residential

	All Structures		Res. Structures	
	#	%	#	%
A	370	19.2	277	19
B	1273	66.1	948	65.2
C	262	13.6	210	14.5
D	21	01.1	17	1.2
	<u>1926</u>	<u>100</u>	<u>1452</u>	<u>99.9</u>

TABLE 1

COMPARISON OF THE EFFECTS OF THE TWO METHODS

Method A

Method B

Year	Value
1911	100
1912	105
1913	110
1914	115
1915	120
1916	125
1917	130
1918	135
1919	140
1920	145
1921	150
1922	155
1923	160
1924	165
1925	170
1926	175
1927	180
1928	185
1929	190
1930	195
1931	200
1932	205
1933	210
1934	215
1935	220
1936	225
1937	230
1938	235
1939	240
1940	245
1941	250
1942	255
1943	260
1944	265
1945	270
1946	275
1947	280
1948	285
1949	290
1950	295
1951	300
1952	305
1953	310
1954	315
1955	320
1956	325
1957	330
1958	335
1959	340
1960	345
1961	350
1962	355
1963	360
1964	365
1965	370
1966	375
1967	380
1968	385
1969	390
1970	395
1971	400
1972	405
1973	410
1974	415
1975	420
1976	425
1977	430
1978	435
1979	440
1980	445
1981	450
1982	455
1983	460
1984	465
1985	470
1986	475
1987	480
1988	485
1989	490
1990	495
1991	500
1992	505
1993	510
1994	515
1995	520
1996	525
1997	530
1998	535
1999	540
2000	545
2001	550
2002	555
2003	560
2004	565
2005	570
2006	575
2007	580
2008	585
2009	590
2010	595
2011	600
2012	605
2013	610
2014	615
2015	620
2016	625
2017	630
2018	635
2019	640
2020	645
2021	650
2022	655
2023	660
2024	665
2025	670
2026	675
2027	680
2028	685
2029	690
2030	695
2031	700
2032	705
2033	710
2034	715
2035	720
2036	725
2037	730
2038	735
2039	740
2040	745
2041	750
2042	755
2043	760
2044	765
2045	770
2046	775
2047	780
2048	785
2049	790
2050	795
2051	800
2052	805
2053	810
2054	815
2055	820
2056	825
2057	830
2058	835
2059	840
2060	845
2061	850
2062	855
2063	860
2064	865
2065	870
2066	875
2067	880
2068	885
2069	890
2070	895
2071	900
2072	905
2073	910
2074	915
2075	920
2076	925
2077	930
2078	935
2079	940
2080	945
2081	950
2082	955
2083	960
2084	965
2085	970
2086	975
2087	980
2088	985
2089	990
2090	995
2091	1000
2092	1005
2093	1010
2094	1015
2095	1020
2096	1025
2097	1030
2098	1035
2099	1040
2100	1045

Year	Value
1911	100
1912	105
1913	110
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1915	120
1916	125
1917	130
1918	135
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1921	150
1922	155
1923	160
1924	165
1925	170
1926	175
1927	180
1928	185
1929	190
1930	195
1931	200
1932	205
1933	210
1934	215
1935	220
1936	225
1937	230
1938	235
1939	240
1940	245
1941	250
1942	255
1943	260
1944	265
1945	270
1946	275
1947	280
1948	285
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1950	295
1951	300
1952	305
1953	310
1954	315
1955	320
1956	325
1957	330
1958	335
1959	340
1960	345
1961	350
1962	355
1963	360
1964	365
1965	370
1966	375
1967	380
1968	385
1969	390
1970	395
1971	400
1972	405
1973	410
1974	415
1975	420
1976	425
1977	430
1978	435
1979	440
1980	445
1981	450
1982	455
1983	460
1984	465
1985	470
1986	475
1987	480
1988	485
1989	490
1990	495
1991	500
1992	505
1993	510
1994	515
1995	520
1996	525
1997	530
1998	535
1999	540
2000	545
2001	550
2002	555
2003	560
2004	565
2005	570
2006	575
2007	580
2008	585
2009	590
2010	595
2011	600
2012	605
2013	610
2014	615
2015	620
2016	625
2017	630
2018	635
2019	640
2020	645
2021	650
2022	655
2023	660
2024	665
2025	670
2026	675
2027	680
2028	685
2029	690
2030	695
2031	700
2032	705
2033	710
2034	715
2035	720
2036	725
2037	730
2038	735
2039	740
2040	745
2041	750
2042	755
2043	760
2044	765
2045	770
2046	775
2047	780
2048	785
2049	790
2050	795
2051	800
2052	805
2053	810
2054	815
2055	820
2056	825
2057	830
2058	835
2059	840
2060	845
2061	850
2062	855
2063	860
2064	865
2065	870
2066	875
2067	880
2068	885
2069	890
2070	895
2071	900
2072	905
2073	910
2074	915
2075	920
2076	925
2077	930
2078	935
2079	940
2080	945
2081	950
2082	955
2083	960
2084	965
2085	970
2086	975
2087	980
2088	985
2089	990
2090	995
2091	1000
2092	1005
2093	1010
2094	1015
2095	1020
2096	1025
2097	1030
2098	1035
2099	1040
2100	1045

BACK BAY: EXISTING ECONOMIC CHARACTERISTICS

Labor Force Participation:

For persons fourteen years of age and older in Back Bay, the rate of participation in the labor force is significantly higher than the rate for Boston or the region as a whole. This characteristic does not apply to the male population within Back Bay, as their rate corresponds with the city norm. The labor force participation rate for females within the community is however one and half times the city rate and almost double the regional rate. For both sexes, in Back Bay, participation in the labor force has risen significantly since 1950.

Unemployed within the area is well below the general city rate. Again however the working male population corresponds to the city norm. For females the rate of unemployment is but half that recorded for females generally throughout the city.

Employment by Occupation:

Along with the very high participation rate and low unemployment rate, the residents of Back Bay present a very specialized pattern and high level of operative skills. The proportion represented in the general category "white collar" is one third over the city norm, and higher than the regional proportion. The distribution of occupations by sex is especially significant. For females, the dominant category is "clerical" as might be expected. However the only other dominant group for females is professional-technical and the residence of females so classified is numerically greater than for males, even though this category dominates the distribution of male occupations. For

males the next leading category is the other top-ranking white collar category of "managers, proprietors and officials".

In comparison to city and regional norms the "blue collar" occupations were drastically under represented in Back Bay in 1950 and even more so in 1960. The percentage of occupations "not reported" was in Back Bay two and half times the city rate. It can be presumed that a reduction of this element and consequent redistribution of occupations would make by direct percentage comparison, the specialized distribution of Back Bay occupations look more unique.

Commutation to Work:

The proportion of employed residents of Back Bay who work within the city of Boston, (82%) is essentially the same as the percentage for the employed residents throughout the city. Half of the remainder have job locations across the Charles River in Cambridge as would be expected.

The means of transportation utilized in daily work trips differs radically from the general city pattern. The use of automobiles is but one-half the city average, as is work travel by bus or streetcar. The use of subway facilities is also below the city norm. However, almost one third walk to work, a proportion almost two and half times the rather high city rate of 13%. In addition, a large percentage of the Back Bay working population either use "other means", (presumably taxis, by and large), or work at home. The general conclusion must be that this area does not generate a daily worker load on transportation facilities, including streets, proportional to its high density or high labor force participation rate.

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Income and Earnings:

In view of the labor force and occupational characteristics outlined above, it is not surprising that the family income level of Back Bay is significantly higher than the average recorded for the city. The median family income in 1960 for families throughout Boston was approximately \$5750. For Back Bay, the figure was \$6450, or an average of \$700 more per year. A significant 28% of all families earn over \$10,000 per year, which is double the city wide percentage and much higher than the 21% recorded for the region as a whole. It should be noted however that the incidence of low family incomes approximate or even exceed the general city average.

Dealing with only family incomes tends to obscure the income pattern of the high proportions of unrelated individuals residing in Back Bay. The median income of families and unrelated individuals, falls far below the city wide figure of \$4260. The same proportional disparity existed in 1950. Though such data is not available, one can only surmise that incomes for unrelated individuals alone, excluding families, fall even shorter of the city norm.

Both the statistical and physical distribution of family earning power within Back Bay is noteworthy. The three census tracts south of Boylston Ave. to the New Haven Railroad have fairly low family incomes and fall within the third, (next lowest) quartile of the city income distribution. Family incomes from Boylston Ave north to Commonwealth and Marlborough Aves. are much ~~kk~~ above the city median, --\$7435 to 5750. The area north of Marlborough Ave. to the Charles River is even higher, (\$9866) within the first quartile of the family income distribution for the city, and over 3000 above the city median.

SCHOOLS

(Major assumption: decrease in rate of out-migration in the City as a whole.)

	<u>Assumptions</u>	<u>Abandon</u>	<u>New Construction</u>	<u>Year</u>	<u>Service Area Center</u>
<u>Back Bay</u>					
	<u>Not expected to</u> produce large numbers of public school pupils.	C.C.Perkins	..	1975	
		Prince	200 K-5 School	1966	On present site of State Dept. of Education Offices

RECREATION - BACK BAY

I. Existing Facilities

	Location	Size	Site Character	Environment	Facilities	Use
<u>Covered</u>	None Public WMCA on Huntington					
<u>Open Intensive</u> <u>Active</u>			<i>None</i>			
<u>Open Intensive</u> <u>Passive</u>	Copley Square Commonwealth Ave Trinity Triangle	.5 acres 32 acres .2 acres <u>32.7 tot.</u>				
<u>Open Extensive</u> <u>Active</u>			<i>None</i>			
<u>Regional</u> <u>Accessible</u>	Boston Common Back Bay Fens Public Garden Charles Esplanade	48.40 acres 114.60 acres 24.25 acres <u>187.25 tot.</u>				



RECREATION - BACK BAY

III. Unmet Quantitative Needs

	<u>Existing</u>	<u>1960 Client</u>	<u>Standard</u>	<u>Deficiencies</u>
<u>Open Intensive Active</u>				
Tot Lots	0	0-4 age 374	.14 acres per 100	.52 acres
Playgrounds A	0	↑ 5-9 age 219 ↓	1.1 acres per 350	1.1 acres
Playgrounds B	0		.2 acres per 100	.4 acres
<u>Open Intensive Passive</u>	32.7 acres	total population 18, 292	1.5 acres per 2,000	19.2 acres over standard
<u>Open Extensive Active</u>	0	10 - 19 age 1803	3.7 acres per 800	8 acres
<u>Regional</u>	187.25 acres			

LIBRARIES

Existing Facilities

<u>Location</u>	<u>Age</u>	<u>Adequacy of Facility</u>
-----------------	------------	-----------------------------

Back

Copley Square
Main Library

Library is planning
to expand

Bay

HEALTH FACILITIES

None and no need

Back Bay: Fire Stations

Existing

Back Bay, 941 Boylston

Year Built: 1888

Building Condition: 2 engine. Fair condition.

Site Characteristics: No recreation space.

Environmental: Connected to the Police Station. Prudential

Center across.

Relation to Service Area: Inefficient - too far to serve westerly.

Too close to South End station.

Rothermel Proposals: (3/4 - 1 mile radius)

Abandon: 1) Boylston and Hereford

New Construction: None

Rationale: (area served by new station proposals at Isabella and Fenway outside of GNRP)

RECEIVED 1914 JAN 10

1914

RECEIVED 1914 JAN 10

1914

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POLICE STATIONS

EXISTING FACILITIES

<u>Location</u>	<u>Description</u>	<u>Rothermel Proposals</u>	<u>Rationale</u>
<u>Back Bay</u>			
951 Boylston	Police Dept. hopes to abandon this station - traffic problem in the next few years while turnpike is being built - also old, obsolete building	No new sta- tion proposed within the GNRP.	The existing South End Station will serve Back Bay adequately.



Back Bay GNRP: Industrial and Wholesale Space

In terms of land area, industrial and wholesale space occupy a small portion of the Back Bay, but in terms of employment these activities are surprisingly significant. The publishing plant of the Christian Science Monitor with more than 1,000 employees accounts for the major share of the employment; drug, candy, computer research, and miscellaneous other manufacturers account for the remainder of the employment.

Most of the industrial and wholesale space is in Condition B in the Back Bay. No vacancy was recorded in any of the space.

It is located primarily along Boylston Street, the only street in Back Bay which has an entirely non-residential character. Off-street loading seems adequate; the back alleys in the Back Bay permit loading from the rear. Off-street parking, although inadequate generally in the Back Bay, is probably adequate for industrial employees who should be traveling to Back Bay jobs by MTA rather than by car.

An increase in industrial space is neither likely nor desirable in the Back Bay. An increase in wholesale space may be needed, however, to service the new office and hotel space now being constructed in Back Bay. Wholesalers of restaurant equipment, office furniture, exhibition equipment, may seek locations near the Prudential Center. As the Back Bay expands as a prime office area, areas for ancillary business services and distributors will be required, not necessarily in the GNRP but in nearby locations.

in 1776, the year of the American Revolution, the British government was in a state of confusion and the colonies were in a state of rebellion. The British government was in a state of confusion and the colonies were in a state of rebellion. The British government was in a state of confusion and the colonies were in a state of rebellion.

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M A S T E R S H E E T

Back Bay GNRP

	<u>Industrial</u>	<u>Wholesale</u>	<u>Commercial</u>
Total Space	148,166	134,001	6,972,524
Vacant Space	-	-	113,179
Per cent Vacant	0	0	1.6

Condition

Per cent in Condition

A:	0	0	47.0
B:	80.1	100.0	46.0
C:	19.8	0	6.9
D:	<u>0</u>	<u>0</u>	<u>0.4</u>
	100.	100.	100.

Per cent Vacant of Condition

A:	0	0	0.7
B:	0	0	2.5
C:	0	0	5.7
D:	0	0	14.3

Per cent of all Vacant in Condition

A:	0	0	2.3
B:	0	0	73.0
C:	0	0	24.6
D:	0	0	<u>0</u>
			100.

1911-1912

Summary

Category	1911	1912	Total
Income	1000	1200	2200
Expenses	800	900	1700
Profit	200	300	500

Category	1911	1912	Total
Income	1000	1200	2200
Expenses	800	900	1700
Profit	200	300	500

Category	1911	1912	Total
Income	1000	1200	2200
Expenses	800	900	1700
Profit	200	300	500

BACK BAY GNRP - FLOOR SPACE

Commercial

Condition

<u>BRA</u> <u>AREA</u>	<u>A</u> <u>Total Vacant</u>	<u>B</u> <u>Total Vacant</u>	<u>C</u> <u>Total Vacant</u>	<u>D</u> <u>Total Vacant</u>	<u>E</u> <u>Total Vacant</u>	<u>F</u> <u>Total Vacant</u>
1	1230163					
2		50243		3000		
3	1041607	936435	5422	178409	9970	4000
4		384421		132018	13150	
5	31513	1550	10350			
6	974835	1071	1826957	77216	168573	4800
TOTALS	3,278,118	3,208,406		482,000		4,000
		2,621	82,638		27,920	

THE UNIVERSITY OF CHICAGO

1900

1901

THE UNIVERSITY OF CHICAGO

1902

THE UNIVERSITY OF CHICAGO

1903

1904

THE UNIVERSITY OF CHICAGO

THE UNIVERSITY OF CHICAGO

BACK BAY GMRP - FLOOR SPACE

Industrial

Condition

<u>BRA</u> <u>AREA</u>	<u>A</u> <u>Total Vacant</u>	<u>B</u> <u>Total Vacant</u>	<u>C</u> <u>Total Vacant</u>	<u>D</u> <u>Total Vacant</u>
1				
2		28688	11225	
3		53062	18119	
4				
5				
6		32072		
TOTALS		118,822	29,344	

THE HISTORY OF THE

REIGN OF

CHARLES THE FIRST

IN WHICH ARE CONTAINED THE PARTICULARS OF HIS REIGN, AND THE
CIRCUMSTANCES OF HIS DEATH, AND THE CONSEQUENCES THEREOF.

BY

JOHN BURNET

LONDON

MANUFACTURING WITHIN BACK BAY GMRP (R-47)

Rank order by size; and type ...

1000 plus employees	Publisher
100 - 250 employees	Candy Computer Research
25 - 100 employees	Drugs Machine Tools Rust Preventative
8 - 25 employees	Stage Draperies Incinerators Foundation Equipment Badges Diamond Tools Furniture

Total manufacturing employment: 1632

Largest: Christian Science Monitor

BACK BAY GNRP - FLOOR SPACE

Wholesale

Condition

<u>BRA</u> <u>AREA</u>	<u>A</u> <u>Total Vacant</u>	<u>B</u> <u>Total Vacant</u>	<u>C</u> <u>Total Vacant</u>	<u>D</u> <u>Total Vacant</u>	
1					
2					
3		53664			
4					
5					
6		80337			
TOTAL		134,001			

BACK BAY

Circulation and Transportation

The Back Bay is both a major destination for traffic and a traffic corridor leading to other parts of the business district and to many of Boston's largest institutions.

Transportation facilities serving the area are extensive and intense usage is high. The relative importance of highway and mass transit facilities in terms of providing service to commuter traffic destined for the offices and other commercial establishments located in the area is indicated by an origin and destination survey conducted by the Metropolitan Transit Authority in 1956 and included in the report, Proposed Office Facilities Located in Most Additional

Locations from the Prudential and Government Center Projects. Based on 6,300

interviews it was found that trips to work in the Back Bay were made as follows:

M.T.A.	31.1%
Automobile	22.0%
Railroad	10.3%
Walk	4.3%
Suburban bus	3.3%
	100%

a) Major Facilities and Corridors

Major Highways

Commonwealth Avenue (St. 20 and C1) is major arterial serving radial traffic in the western portion of the metropolitan area - highly congested - ends at Public Garden - no truck traffic permitted

Massachusetts Avenue - forms western boundary of CBD - serves as a

major north-south route - highly congested - heavy truck traffic - truck parking and loading facilities with freight terminals.

Washington Avenue - (RT 2) - Major radial connector to Brookline and Winchester Turnpike (RT 9) - highly congested.

Storrow Drive - forms northern boundary of GMP - a limited access highway serving radial traffic to the west and northwest - access to Back Bay GMP from Clarendon St. exit (RT 284 - on way south) - access to Storrow Drive from Dudley St. (one way north) - no truck traffic permitted.

Dodge Turnpike - (presently under construction, to be completed by 1980) - limited access toll highway which runs diagonally through the GMP area along the Boston and Albany R. R. tracks. Interchanges are to be constructed at the Prudential Center (Bank/Union Square). A westbound overpass is also proposed by the Turnpike Authority at Massachusetts Avenue. The Turnpike will serve as an additional radial highway connecting Downtown Boston to the West.

Bus Rapid Transit

Several bus rapid transit lines are operated by the Metropolitan Transit Authority. Full transit service is provided by the New York, New Haven and Hartford Railroad and the Boston and Albany Railroad.

Bay State Avenue, Boston - This line at the intersection of Massachusetts Avenue and Bay State Avenue, at Bay State and Arlington Streets and at Bay State and Copley Streets. The line proceeds from South Station, through the Back Bay and to South Station. It then becomes a surface line on local streets and quits to serve several areas including Mattapan, Boston College and Cleveland Circle. The Highland Branch also splits off near South Station and proceeds via its own right of way through Boston and Riverside near the MB.

Huntington Avenue, Boston - The line commences from the Boston Convention Center at a point near the Copley Station and proceeds via Huntington Avenue to the southeast. It provides service to Massachusetts University, then becomes a surface line and proceeds past the Harvard Medical School, the Veterans Administration Hospital, through Jamaica Plain to Forest Hills. Stops within the MBTA area are at the intersection of Huntington Avenue and West Boston Street (Beachmont) and at Huntington and Massachusetts Avenue (Copley).

~~The~~ ^{The} ~~operation~~ ^{operation} of the N.Y.N.H. facilities in the Back Bay were extensively investigated in a report prepared by the MBTA Engineering Department and released in March 1963 titled Proposed Heavy Facilities Required to Serve All Level Lines from the Downtown Crossing Station. Conclusions with respect to the operation of the facilities in 1963 (prior to the opening of the Highland Branch) were as follows:

- 1) Considerable delay and congestion were experienced during rush hours.
- 2) Difficulties in loading were primarily due to the capacity of the station to handle passengers.

CHAPTER I. THE DISCOVERY OF AMERICA.

IN THE YEAR 1492, CHRISTOPHER COLUMBUS, AN ITALIAN, WAS THE FIRST EUROPEAN TO DISCOVER AMERICA.

HE WAS SPONSORED BY THE KING AND QUEEN OF SPAIN.

HE SAILLED FROM PALERMO, ITALY, ON SEPTEMBER 8, 1492.

HE REACHED THE ISLANDS OF THE CARIBBEAN ON OCTOBER 12, 1492.

HE NAMED THE ISLANDS "SAN SALVADOR" AND "SAN PEDRO."

HE FOUND THE INDIANS LIVING IN HUTS MADE OF PALM LEAVES.

HE TOOK THEM TO BE "INDIANS" BECAUSE THEY WERE LIVING IN HUTS MADE OF PALM LEAVES.

HE FOUND THEM TO BE A PEACEFUL PEOPLE.

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HE TOOK THEM TO BE "INDIANS" BECAUSE THEY WERE LIVING IN HUTS MADE OF PALM LEAVES.

- a) The junction of the Madison St. and Huntington Avenue always holds the capacity of both sets of tracks past the junction.
- b) The subway (in 1950) was operating at or near capacity which would be reached or exceeded with the opening of the Highland Branch.
- c) Although there has been a decline in patronage throughout the city system as a whole, there has been practically no change in the use of the subway stations in the North End.

Bus Lines

A cross-town route runs along Massachusetts Avenue from Harvard Square and Center Street to Arlington St. on Huntington Avenue.

Rail Passenger Service

The main line of the New York New Haven and Hartford Railroad passes through the CBD area and all passenger trains stop at the South Bay station as well as the North Bay St. It provides service for suburban residents to the south.

The Boston and Albany Railroad also stops at the South Bay Station and serves a number of suburban communities to the west.

Parking Facilities

Parking space is extremely limited both for day time commercial use and for residential parking. Except for a few small and scattered lots the only off-street facilities that exist within the CBD area are found between Huntington Ave and the N.Y.N.H. & H. Railroad.

Garage capacity 1893

Lot capacity 116

Total 2009

Locations of these garages and lots and their rated capacity are indicated on the existing circulation map.

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b) Future Urban and Traffic

Highways

Completion of the Turnpike extension will have a tremendous impact on the Deer Bell. Its effects on this and other areas has been studied by Robert G. Blumenthal Associates, engineering consultants. A report with recommendations titled Massachusetts Turnpike Extension Traffic in Incoming Years was completed June 1, 1962 for the Metropolitan Authority and the Boston Traffic and Planning Department.

The report recommends a number of changes in Turnpike ramp design and the local street pattern. The principal recommendations are listed below:

- 1) Widen Mass Avenue by 5 feet on either side to increase pavement width to 60 feet.
- 2) Eliminate the proposed Turnpike ramp west bound from Massachusetts Avenue.
- 3) Alter the design of the Turnpike's Huntington Avenue interchange and related streets to permit smoother traffic flow and reduce costs.

These and other more minor changes are still being negotiated at this time.

Completion of the Deer Bell through the Everett Center Hill -Harvard area will also have an impact on the area. Until it is constructed traffic will be increasingly congested on Massachusetts Avenue, particularly after the completion of the Turnpike extension.

Metropolitan Transit Authority Facilities

The MTA report also predicts the need for facilities of nearly

enable their present operation with the construction of the Franklin D. Roosevelt Center.

The major improvements mentioned in the enclosure which occur in the Back Bay (B.B.) are ~~described in the following list~~ listed as follows:

- 1) Construction of a subway line on South Street connecting the Huntington Avenue subway with the existing Tremont Street subway. This will allow bypassing the congested North St. line. Two new stations would be built; one at Copley on Street. The other in the South Cove area at Church Street.

- 2) Installation of escalators at Copley, Mechanics and Massachusetts Stations.

Total cost of the above improvements was estimated at 21 million dollars.

A review of this proposal was made by the Boston Planning Board in 1960.

(Memorandum to Thomas J. Griffin, Commissioner, Boston Traffic Commission, from Donald R. Graham, Planning Administrator dated October 13, 1960). The review offered an alternative proposal for the development of a South Street subway using trolley cars. It stated "... it would be short-sighted to build new facilities requiring the use of trolley cars... the proposed tunnel should not connect to the Huntington Avenue line, but should join the present B.M.A. railroad tracks and follow these tracks to Riverside. This routing would permit the use of rapid transit trains..."

This project is now over four years old with major improvements between the Tremont Street subway and Bowling Green are considered to be among the top priority items for improved M.T. service. However, little seems to have been done to initiate action on any of the improvements in the Back Bay.

Another proposal for increasing M.T. service is to utilize the existing Boston and Albany railroad right of way to connect the Riverside extension to the

Project 54, Tunnel. Since new tunnel access will be provided to the
Frustrated Center.

This project will also involve the alignment of the tunnel entrance
since this area will be daily provided. Another is that it is still doubtful
whether further work.

Project

There is planned a 1.5 mile parking area around the Frustrated
place with direct access to adjacent buildings.

Appendix

Deck No. - Circulation

on Street Parking

April	-	2,177 spaces
Illness	-	22 "
Total		2,199 "

Source: Figures supplied from Robert Murphy, The Disappearance of Parking
Congestion in Boston, Massachusetts (M.I.T. Thesis, 1963)

Above source also indicates a deficiency of approximately 1,000 spaces existed in the vicinity of City Square, a deficiency of 100 spaces between Academy St. and Storrow Drive, and a surplus of space to the south and west of the Prudential site.

High Accident Frequency Intersections

A report covering all major accident points for the years 1958-60 is available from the Boston Traffic Department. High accident rates are prevalent all along Massachusetts Avenue and at many other points in the area as listed below:

1958-60 Accident Totals

Mass. Avenue and Marlborough	28
" " " Dudley	27
" " " St. Raphael	130
Commonwealth and Marlborough	76
" " " Essex	71
" " " Mass. Avenue	61
Huntington Ave. and Mass. Avenue	243

BACK BAY SHOPPING CENTERS

General Description

The Back Bay GMRP, being a part of central Boston, contains many commercial activities that either belong with the central business district, or draw a considerable market from areas outside the GMRP. Those convenience goods and service establishments serving strictly the local population seem too few in number and are grouped mainly at the westerly end of the GMRP.

Massachusetts Avenue is the principal shopping street of the Back Bay, having a service area of which the so-called Back Bay GMRP is only about one-half in terms of population, and which probably includes a portion of the South End and the MIT community as well. Why local shopping was established originally on Massachusetts Avenue instead of one of the arterials is not clear. But the general configuration of Massachusetts Avenue development (which runs north-south) relates poorly to that of its service area (which is elongated in an east-west direction from Arlington St. to Park Drive). The extremities of this area are a mile from Massachusetts Avenue, and with the district's low automobile ownership and woefully inadequate parking, the problem of shopping for daily needs is a difficult one for most residents.

The present Massachusetts Avenue shopping strip has two nodes: one at Boylston Street (which serves the northerly part of Back Bay, and the MIT and BU communities), and one at Huntington Ave. (which serves the institutions grouped near it plus the southerly part of Back Bay, which is inhabited by a different social group, by

and large, from that north of Boylston). The Globe survey considers Massachusetts Avenue perhaps erroneously, as two centers. Altogether this center seems short on strictly convenience goods outlets and long on apparel, eating, and consumer service establishments. The heavy cross town traffic on Massachusetts Avenue is a hindrance to convenient access to stores and vice versa. Off street parking is tight (except for one private lot at Mass. and Westland), but not tight enough so far to force the City to build public parking facilities. There are few vacancies - Mass. Ave. being a high demand location. There has been considerable demolition recently, but commercial redevelopment may be awaiting completion of the Prudential center nearby.

The Prudential shopping center will probably serve many of the primary and secondary shopping needs of Back Bay residents, but so far as is known, will not be strong in convenience goods outlets. It should be classed as central business and city-wide in orientation.

The small cluster of convenience establishments at the corner of Stuart and Dartmouth Streets is being truncated by the Turnpike extension. One feels this center will increasingly take on the characteristics of central business.

The St. Botolph Street area is presently served by strip shopping along the southerly side of Huntington Avenue. The current speculation that this frontage is in line for private redevelopment as a consequence of Prudential construction across the street suggest that this strip will also change character to a city-wide orientation.

and later the 1950s. The 1950s were a period of rapid growth and development. The 1960s were a period of social and political change. The 1970s were a period of economic and social change. The 1980s were a period of economic and social change. The 1990s were a period of economic and social change. The 2000s were a period of economic and social change. The 2010s were a period of economic and social change. The 2020s were a period of economic and social change.

Suggestions for Future Shopping

The poor physical relationship of the Mass. Ave. shopping strips to its service area as well as the paucity of convenience goods outlets in the area suggests the need for development of three small compact centers to be devoted strictly to convenience goods and services for the local population. One should serve the present GMRP (or that part of it north of Boylston, and should be located along Newbury Street between Exeter and Fairfield). Another is needed to cover the area between the Fens and the Brookline line and to supplement Kenmore Square. (This is outside the GMRP) A third should serve the remaining areas - those lying between Prudential, the Fenway, and the New Haven Railroad, including a considerable institutional population. This third center should be located somewhere near the intersection of Huntington and Mass. Ave. (the present focal point of southerly Back Bay), perhaps as a redevelopment of old commercial uses in the present center. But unlike the Mass. Ave. strip, this new center should have an east-west orientation to correspond with that of its service area.

One feels that the future of most of the Mass. Ave. strips lies in the direction of activities serving a greater than local market, including the ever increasing institutional population that is tending to surround it. Since Mass. Ave. must remain an important thoroughfare, even after construction of the Inner Belt, new commercial development in the strip should be "nonstriplike" in its design- i.e. should have depth as well as frontage and perhaps off street parking

The first of these is the fact that the

people of the United States are not

entirely united in their views on the

subject of the right of the States

to secede from the Union. Some

think that the right of secession

is a necessary part of the right of

self-government. Others think that

the right of secession is a dangerous

and unnecessary one. Still others

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is a right which should be reserved

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and access from the rear.

Despite the fact that the CNRP declined in population some 14 percent between 1950 and 1960, need for new shopping facilities can be justified because of the centrality of the area and the incipient return to the city movement on the part of suburban families.

Table 1.1. Generalized Data Summary

Category	1950	1960	1970	1980	1990
Population	10,000	8,500	7,000	6,000	5,000
Commercial Area	100,000	120,000	140,000	160,000	180,000
Industrial Area	200,000	220,000	240,000	260,000	280,000
Residential Area	300,000	320,000	340,000	360,000	380,000
Public Area	400,000	420,000	440,000	460,000	480,000
Green Area	500,000	520,000	540,000	560,000	580,000
Water Area	600,000	620,000	640,000	660,000	680,000
Unimproved Area	700,000	720,000	740,000	760,000	780,000
Total Area	2,500,000	2,600,000	2,700,000	2,800,000	2,900,000

Table 1.2. Detailed Data Summary

Category	1950	1960	1970	1980	1990
Commercial Area	100,000	120,000	140,000	160,000	180,000
Industrial Area	200,000	220,000	240,000	260,000	280,000
Residential Area	300,000	320,000	340,000	360,000	380,000
Public Area	400,000	420,000	440,000	460,000	480,000
Green Area	500,000	520,000	540,000	560,000	580,000
Water Area	600,000	620,000	640,000	660,000	680,000
Unimproved Area	700,000	720,000	740,000	760,000	780,000
Total Area	2,500,000	2,600,000	2,700,000	2,800,000	2,900,000

The data presented in this report are based on a series of surveys conducted over a period of ten years. The surveys were designed to provide a comprehensive overview of the land use and development patterns in the area. The data is presented in two tables, Table 1.1 and Table 1.2, which provide a summary of the data and a detailed breakdown of the data, respectively. The data is presented in a clear and concise manner, making it easy to understand and interpret. The data is presented in a way that allows for a comparison of the data over time, and it is presented in a way that allows for a comparison of the data across different categories. The data is presented in a way that allows for a comparison of the data across different years, and it is presented in a way that allows for a comparison of the data across different categories. The data is presented in a way that allows for a comparison of the data across different years, and it is presented in a way that allows for a comparison of the data across different categories.

Back Bay GNRP Shopping Demand

Total households in GNRP 1960 = 2818

families 2741, avg. family income = $\$23065/2741 = \8700

individuals 5077, avg. individuals income about \$6000 assume gross income for

GNRP = $23,865 + 30,500 = 54,400,000$

Avg. income per household = $54,400/8818 = \$6160$ call \$6200

Avg. expend. for non durable goods = 38% gross income = \$2350

Avg. expend. for services = 31% " " = 1900

Local Consumer Expenditures per Household

Type of shopping	% of gross income 66.82	income 38%	\$ expend per hshld	local assign.	\$ expend local per hshld
convenience goods	35.45	20.20	1253	80	1000
dept. store & apparel	17.43	9.90	615	40	245
furn. household, eat, drink	6.06	3.45	214	40	85
automotive	7.88	4.48	278	40	110
sub total		38.03	2360		1440
pers. serv.			140	55	120
total			2500		1560

Theoretical Local Retail Space Needs

Type of shopping	\$ expend in GNRP (000)	Sales \$ per sq ft	sq.ft.sales area req'd	non sales factor	total floor space req.
convenience goods	8820	100	88,000	1.4	123,000
dept. store & apparel	2160	65	33,000	1.3	43,000
furn., household, eat, drink	750	160	4,700	2.0	9,500
automotive	970	60	16,300	2.0	32,500
pers. service	1060	60	18,000	1.3	23,000
total	13760		160,000		231,000

The above estimate applies only to demand of local households within GNRP. Only one half of Mass. Ave shopping area is in GNRP. Service area pop. of entire center is probably double that for GNRP, but this population shops in many surrounding centers as well. The above estimate of demand is practically meaningless because of the centrality of the Back Bay and peculiarity of its residents.

1000 - 1000 = 0

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1000 - 1000 = 0

1000 - 1000 = 0

Table 1: Summary of Results

Category	Value 1	Value 2	Value 3	Value 4
Category 1	1000	1000	1000	1000
Category 2	1000	1000	1000	1000
Category 3	1000	1000	1000	1000
Category 4	1000	1000	1000	1000
Category 5	1000	1000	1000	1000
Category 6	1000	1000	1000	1000
Category 7	1000	1000	1000	1000
Category 8	1000	1000	1000	1000

Table 2: Summary of Results

Category	Value 1	Value 2	Value 3	Value 4
Category 1	1000	1000	1000	1000
Category 2	1000	1000	1000	1000
Category 3	1000	1000	1000	1000
Category 4	1000	1000	1000	1000
Category 5	1000	1000	1000	1000
Category 6	1000	1000	1000	1000
Category 7	1000	1000	1000	1000
Category 8	1000	1000	1000	1000

1000 - 1000 = 0

1000 - 1000 = 0

1000 - 1000 = 0

1000 - 1000 = 0

Back Bay Shopping Centers

<u>Number</u>		<u>Name of Center</u>	<u>No. of Stores</u>	
<u>1962</u>	<u>1956</u>		<u>1962</u>	<u>1956</u>
17	104	Stuart and Dartmouth	62	58
21	88	Mass. Ave. and Boylston	236	239
22	103	Huntington and W. Newton	76	75
73	81	Huntington and Mass. Avenue	99	94
Total number of estabs.			473	466

Table 1: Summary of Data

The following table provides a summary of the data collected during the experiment.

Table 1: Summary of Data

Time (s)		Speed (m/s)		Distance (m)	
0	0	0	0	0	0
10	10	1.0	1.0	10	10
20	20	2.0	2.0	40	40
30	30	3.0	3.0	90	90
40	40	4.0	4.0	160	160
50	50	5.0	5.0	250	250
60	60	6.0	6.0	360	360
70	70	7.0	7.0	490	490
80	80	8.0	8.0	640	640
90	90	9.0	9.0	810	810
100	100	10.0	10.0	1000	1000

Total Time: 100s

Total Distance: 1000m

Final Speed: 10.0 m/s

End of Document

The following table provides a summary of the data collected during the experiment.

Time (s)	Speed (m/s)	Distance (m)
0	0	0
10	1.0	10
20	2.0	40
30	3.0	90
40	4.0	160
50	5.0	250
60	6.0	360
70	7.0	490
80	8.0	640
90	9.0	810
100	10.0	1000

Total Time: 100s

Total Distance: 1000m

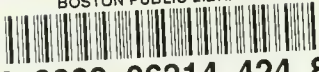
Final Speed: 10.0 m/s

Source: ~~Black~~ ~~Black~~ 97A75, M5T. 192, 62-1

NOTE:

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